

Amendments to the Drawings:

The attached drawing sheet includes changes to FIG. 1. FIG. 1 is amended to include a notation indicating that the figure represents prior art.

REMARKS/ARGUMENTS

In the Office Action mailed June 27, 2008, claims 1-3 and 5-12 were rejected. Additionally, the drawings were objected to. In response, Applicant hereby requests reconsideration of the application in view of the amendments and the below-provided remarks.

For reference, claim 1 is amended to include a limitation drawn from claim 5, specifically that the first passband is a band-pass passband. Claim 5 is amended to remove the limitation added to claim 1. Also, FIG. 1 is amended to include a "Prior Art" notation.

Objections to the Drawings

The Office Action states that Figure 1 should include a legend to designate the illustrated subject matter as prior art. Applicant submits Figure 1 is amended to include a legend to designate the illustrated subject matter as prior art. Accordingly, Applicant respectfully requests that the objection to Figure 1 be withdrawn.

Claim Rejections under 35 U.S.C. 102 and 103

Claims 1-3, 6, 7, and 10-12 were rejected under 35 U.S.C. 102(e) as being anticipated by Kodim (U.S. Pat. No. 7,005,940, hereinafter Kodim). Additionally, claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kodim. Additionally, claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kodim in view of Phillips et al. (U.S. Pat. No. 6,765,536, hereinafter Phillips). Additionally, claim 9 was rejected under 35 U.S.C. 103 (a) as being unpatentable over Kodim in view of Fukamachi et al. (U.S. Pat. Pub. No. 2004/0266278, hereinafter Fukamachi). However, Applicant respectfully submits that these claims are patentable over Kodim, Phillips, and Fukamachi for the reasons provided below.

Independent Claim 1

Claim 1 recites an “adaptive filter [having] a first passband during the transmit mode and a second passband during the receive mode, wherein the first passband is a band-pass passband.”

In contrast, Kodim does not disclose a filter having a band-pass passband. In addition, Kodim does not disclose a filter that operates during a receive mode. Kodim merely discloses a filter that blocks a frequency where the blocked frequency is changed for two different transmit modes.

Kodim does not disclose a filter having a passband

The Office Action asserts that the multiband transformation stage 14 of Kodim manipulates the length of the transmission lines T1 and T2 to create passbands equivalent to the transmission frequency. Office Action, page 7. Kodim, however, operates in the opposite manner. By varying the effective length of the transmission lines, the multiband transformation stage of Kodim blocks the transmission frequency from reaching the receiver. As stated in Kodim, the use of the transmission lines has the effect that “the low-power stage 16 remains isolated from the high power stage 12 and the antenna port 22.” Kodim, column 8, lines 42-44 (emphasis added). In other words, the transmission lines T1 and T2 of Kodim operate to form a band-stop or notch filter, not a band-pass filter having a band-pass passband.

Since the multiband transformation stage of Kodim is not a filter having a band-pass passband as recited in claim 1, Applicant respectfully asserts that Kodim does not disclose all of the limitations of claim 1. Consequently, Applicant requests that the rejection of claim 1 under 35 U.S.C. 102(e) be withdrawn.

The multiband transformation stage of Kodim does not act as a filter during the receive mode

The Office Action asserts that the multiband transformation stage 14 of Kodim has a passband operable during the receive mode. Office Action, page 7. Kodim, however, does not filter the signal at all in the receive mode. “Since both pin-diodes D1, D2 of the multiband transformation stage 14 are switched off in the third state [receive

mode], the two transmission lines T1, T2 can be considered as a pure transmission line without quarter-wavelength transformer characteristic[s].” Kodim, column 9, lines 56-60 (emphasis added). Since the transmission lines act as pure transmission lines without quarter-wavelength transformer characteristics, the transmission lines do not have any quarter-wavelength filtering characteristics when the pin-diodes D1, D2 are switched off. In other words, the multiband transformation stage does not filter signals during the receive mode.

Since the multiband transformation stage of Kodim is not a filter having a passband during the receive mode as recited in claim 1, Applicant respectfully asserts that Kodim does not disclose all of the limitations of claim 1. Consequently, Applicant requests that the rejection of claim 1 under 35 U.S.C. 102(e) be withdrawn.

The proposed modification of Kodim to include a band-pass filter having a passband is improper

Claim 5, from which the limitation “wherein the first passband is a band-pass passband” of claim 1 is drawn, was rejected under 35 U.S.C. 103(a) over Kodim. The Office Action states that it would have been obvious to one of ordinary skills in the art to modify Kodim to use a band-pass passband for the first passband. Office Action, page 5. Modifying the transformation stage of Kodim to operate as a band-pass filter, however, would change the principle of operation of Kodim. Consequently, such a modification does not form a proper basis for a rejection under 35 U.S.C. 103(a).

The M.P.E.P. states that “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” M.P.E.P. 2143.01 VI (emphasis added). As an example of such “a change in the basic principle under which the [primary reference] construction was designed to operate,” the M.P.E.P. describes that a device designed for rigidity could not be modified to form a rejection of a device designed for resiliency. M.P.E.P. 2143.01 VI citing In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

In this case, the multiband transformation stage in Kodim operates as a band-stop filter that blocks the transmission frequency. Modifying Kodim to include a band-pass

filter that passes only frequencies within a band would be a change to the basic principle under which Kodim was designed to operate. Indeed, it would be a change to the exact opposite of the design of Kodim, because Kodim is designed as a band-stop filter rather than a band-pass filter.

Much as a change from a rigid design to a resilient design represents a change in the basic principle of operation of the device of In re Ratti, in this case, a change from a filter that blocks a frequency to a filter that passes a frequency is clearly a change in the basic principle of operation of Kodim. Consequently, the modification of Kodim proposed by the Office Action is not proper to render claim 1 *prima facie* obvious. As a result, Applicant submits that claim 1, as amended, is patentable over Kodim because Kodim cannot properly be modified to use a band-pass passband.

Dependent Claims

Claims 2, 3, and 5-12 depend from and incorporate all of the limitations of independent claim 1. Applicant respectfully asserts claims 2, 3, and 5-12 are allowable based on an allowable base claim. Additionally, each of claims 2, 3, and 5-12 may be allowable for further reasons.

In regard to claim 5, Applicant respectfully submits that claim 5 is patentable over Kodim for the reasons described above in relation to claim 1. Specifically, the proposed modification of Kodim to include a high-pass passband filter operable during the receive mode would represent a change in the basic principle of operation of Kodim because Kodim merely described using a band-stop filter. Consequently, Applicant requests that the rejection of claim 5 be withdrawn.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

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